

Installation

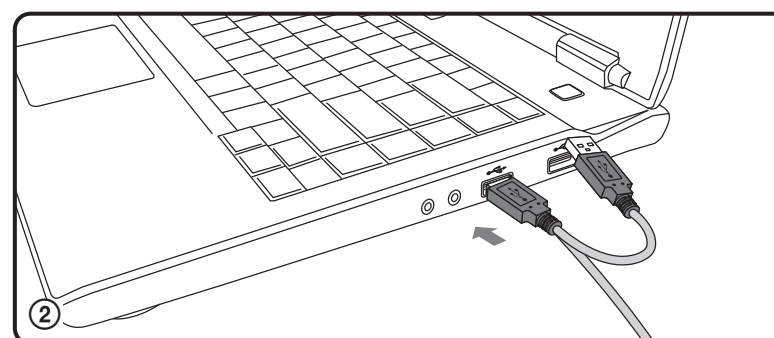
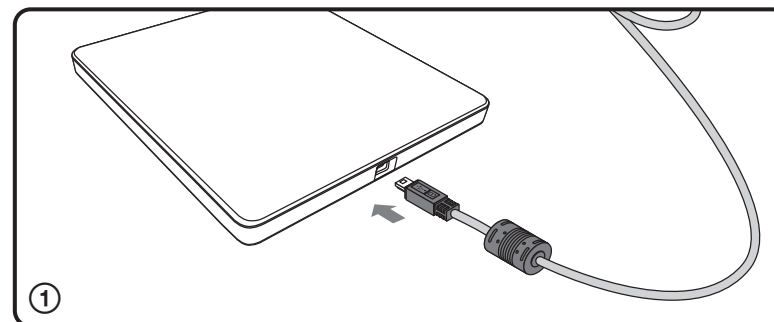
Hardware Installation

NOTES

- Please pay attention to handling Electrostatic Sensitive Devices, you may use anti-static products such as wrist straps, heel straps, mats to protect your body from electrostatic.
- Make sure you have a personal computer with one or two open USB ports before connecting the drive to your computer.

Connecting to computer or A/V Device.

- Connect the drive to the computer as shown in figure.
 - ① Connect the USB 2.0 (Ytype) cable to the drive.
 - ② Connect the other end of the USB 2.0 cable to your computer.
 - ③ The drive may get its power from the PC USB power. All systems may not meet USB power requirements and full performance may not be achieved. In this case, connect the USB power cable.



NOTES

- Please do not connect the USB cables by any means other than specified above. Using the wrong type of cable with this drive can cause it to malfunction.
- The appliance is not intended for use by young children or infirm persons without supervision. Young Children should be supervised to ensure that they do not play with appliance.
- If the appliance is supplied from a cord extension set or an electrical portable outlet device, the cord extension set on electrical portable outlet device must be positioned so that it is not subject to splashing or ingress of moisture.

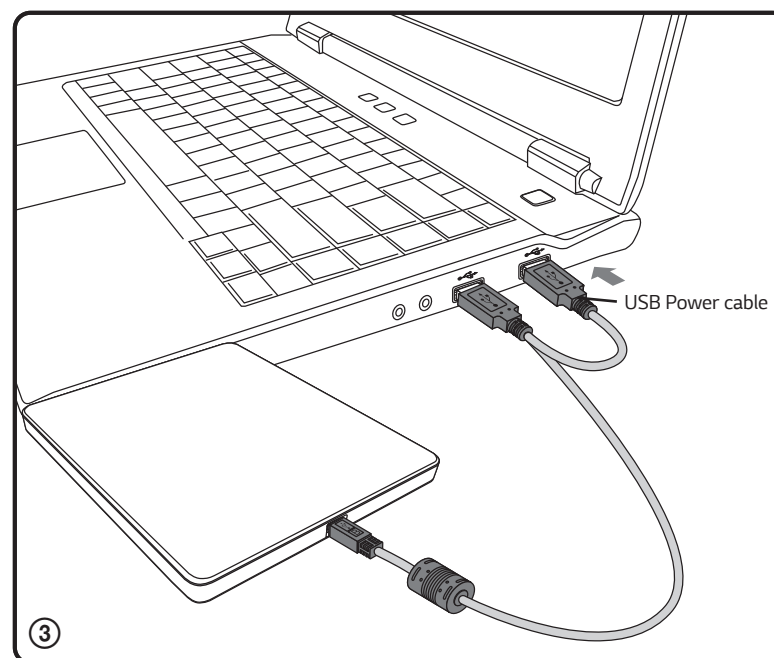
The drive supports both Windows and Mac®. To use it properly, please follow directions below.

How to Eject Disc from the drive

- When using with Mac
 - Click the eject button located on Mac OS menu or toolbar.
- When using with Windows
 - Press the eject button in the front of the product.

NOTES:

- An application included in the Mac OS must be used to play data records or DVD video discs through Mac OS.
 - When recording data: Finder Burn, iTunes must be used.
 - When playing a DVD movie disc: A DVD Player must be used.
- The Mac OS & Windows OS do not include an application that can play Blu-ray movie titles. Separate playback software for Mac OS must be used to play Blu-ray movie titles through Mac OS.
- DVD/Blu-ray movie titles cannot be recorded because of the copyright protection.



Location and Functions

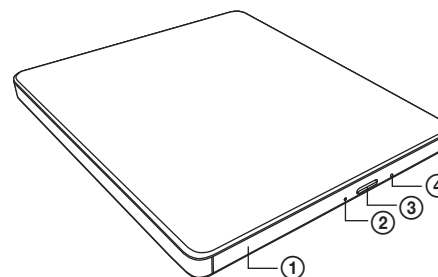
The drive's appearance and specifications may change without prior notice.
This following is the general figure of the design of the drive.

Front View

- ① Disc tray
- ② Drive activity indicator
- ③ Eject Button
- ④ Manual Emergency Eject Hole

The emergency eject procedure should only be used to retrieve your disc if the drive fails to eject.

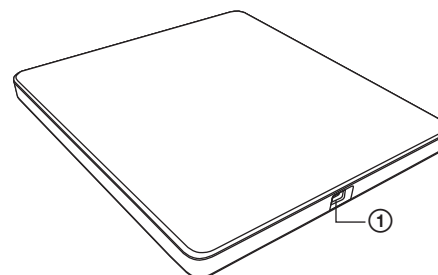
⚠ **Caution:** Shut down the power supply when this eject will be used.



Rear View

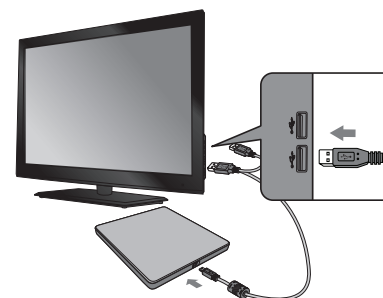
- ① USB Connector (micro)

This connector is used to connect to the USB cable.



What is TV Connectivity?

TV Connectivity is a function that allows you to enjoy videos, pictures and music by connecting this product to a compatible A/V device (e.g.DIGITALTV, DIGITALPHOTO FRAME, PC) that supports USB connectivity.



How to Use TV Connectivity

* This product is defaulted to ODD mode when it is powered on.

1. With the tray open, press and hold the 'Eject' button for 2 seconds.
(The LED indicator will turn on, switching to TV mode. Press and hold the button again for 2 seconds with the tray open to return to ODD mode).
2. Insert your supported media into the drive.
The disc file system will be converted to FAT32 and will be recognized as USB flash memory.
3. Select and play the files from your A/V device to enjoy videos, pictures and music. Refer to your A/V device owner's manual for more information.

NOTES

- Normal operation is not guaranteed if you use a USB hub or unspecified USB extension cables. TV connectivity functions support with files under 4GB.
- Due to compatibility issue of some AV devices and disc, may not work.
- DVD/Blu-ray movie titles and album titles cannot be played when using TV connectivity.
- TV connectivity function may not be available in BD-R/RE DL or XL disc.

To install of your product, please read this guide manual carefully and completely.

Features

- Universal Serial Bus (USB) 2.0 interface for high-speed data transfer.
- Ultra Slim Portable Blu-ray/DVD Writer
- Buffer Under Run error protection technology
- Emergency eject support
- Combination of CD-R/RW, DVD-R/RW, DVD+R/RW, DVD+R DL, DVD-R DL, DVD-RAM, M-Disc(DVD+R SL, BD-R SL), BD-R(SL/DL/TL/QL, LTH) and BD-RE(SL/DL/TL)drive functions into one drive.
- CD Family, DVD-ROM, BD-ROM read compatible.
- Supports BD 3D Movie Play.
- PC USB powered, no AC adapter needed.

Caution:

System meeting the following requirements is needed in order to use USB 2.0 operation with this drive.

- Computer that is equipped with a USB 2.0 – compliant USB connector or PCI adapter card, and on which the USB 2.0 EHCI (Enhanced Host Controller Interface) driver software¹⁾ has been installed.

¹⁾The USB 2.0 EHCI driver software is supplied with currently available PCI adapter cards that conform to USB 2.0. Further, Microsoft has released the USB 2.0 EHCI driver software for Windows XP, therefore it is also possible to use this driver software with Windows XP SP3.

If you want to know in detail, please contact your USB 2.0 adapter dealer or consult your PC manufacturer, or consult the Microsoft Corporation Web site.



MFL67902507

System Environment

Computer

This unit can be operated in the system environment explained here.

System requirements	• CPU : Pentium 2.4 GHz or higher • O/S : Windows 10/8.1/8.0/7/Vista (32 bit, 64 bit)/XP(SP3), Mac OS X v.10.7.5 or higher • RAM : 1 GB or more • HDD : 30 GB or more of available space (60 GB for Blu-ray Disc)
Interface	USB 2.0 (3.0 Compatible)
Recommended media manufacturer	DVD-R : Mitsubishi Kagaku Media, Verbatim. DVD-RW : JVC, Mitsubishi Kagaku Media. DVD+R : Mitsubishi Kagaku Media, Verbatim. DVD+RW : Mitsubishi Kagaku Media, Verbatim. DVD±R DL : Mitsubishi Kagaku Media, Verbatim. M-Disc (DVD+R SL) : Millenniata DVD-RAM : Maxell, Panasonic. CD-R : Mitsubishi Kagaku Media, Verbatim, Taiyo Yuden. CD-RW : LG, Mitsubishi Kagaku Media, Verbatim.

* Compatibility problem in write/read function may occur with some media depending on the media manufacturing quality.

* To achieve maximum Record & Write speed your system may require data to be copied first to the computer's hard drive rather than directly from another source disc or drive.

Blu-ray Disc movie playback

CPU: Following CPU recommended for playing Blu-ray Disc

-Intel: E6400 or higher

3D title playback: Intel Core 2 Duo E6750 (266GHz), AMD Phenom 9450 (2.1GHz) or higher.

Graphic Card: card with following GPU (Graphic Processing Unit) recommended.

-nVidia: GeForce 7600GT or higher/ GeForce 8400 or higher -ATI: ATI Radeon HD 2400 or higher Graphic Card

Driver shall meet AACs compliance criteria. Please consult your graphic card vendor for proper driver solution.

BD movies can be played only with HDMI or DVI Connection.

Specifications

General	Supported Discs	BD-ROM(Single/Dual), BD-R(Single/Dual, LTH), BD-RE(Single/Dual), BD-R/RE XL(3 Layer), DVD-ROM (Single/ Dual), DVD-RW, DVD-R, DVD+RW, DVD+R, DVD+R Double layer, DVD-R Dual layer, DVD- RAM, M-Disc(DVD+R SL, BD-R SL), CD-DA, CD-Extra, CD-ROM, CD-ROM XA, CD-TEXT, CD-R, CD-RW, Photo-CD (Single & Multi-Session), Video CD, DVD-VIDEO, BD-MV		
	Dimensions (WxHxD)	144 mm x 14.6 mm x 15.6 mm (5.7" x 0.6" x 6.1")		
	Weight	About 270 g (0.6 lbs)		
	Interface	USB 2.0 (3.0 Compatible)		
Read/Write Speed *3	Media	Write :	Read :	
	BD-ROM	SL/DL	-	6 x max.
	BD-R	SL/DL	2 x, 4 x, 6 x	6 x max.
		TL/QL(4 Layer)	2 x, 4 x	6 x max.
		SL LTH	2 x, 4 x, 6 x	6 x max.
	M-Disc (BD-R SL)		4 x	6 x max.
	BD-RE	SL/DL	2 x / 2 x	6 x max.
		TL	2 x	4x max.
	BDMV(AACS Compliant Disc)(SL/DL)		-	6 x max.
	DVD-ROM	SL/DL	-	8 x max.
	DVD-R	SL	2 x, 4 x, 8 x	8 x max.
		DL	2 x, 4 x, 6 x	8 x max.
	DVD+R	SL	2.4 x, 4 x, 8 x	8 x max.
		DL	2.4 x, 6 x	8 x max.
	M-Disc (DVD+R SL)		4 x	8 x max.
	DVD+RW		2.4 x, 3.3 x, 4 x, 6 x, 8 x	8 x max.
	DVD-RW		2 x, 3 x, 4 x, 6 x	8 x max.
	DVD-RAM		2 x, 3 x, 5 x	5 x max.
	DVD-Video(CSS Compliant Disc)(SL/DL)		-	8 x max.
	CD-R		10 x, 16 x, 24 x	24 x max.
	CD-RW		4 x, 10 x, 16 x	24 x max.
	CD-ROM/CD-DA		-	24 x max.

Average Access Time (1/3 Stroke)		BD-ROM : 250 ms typ. DVD-ROM : 200 ms typ. CD-ROM : 200 ms typ.
Buffer capacity		4 MB
MTBF		60,000 Power On Hours (Duty Cycle 10 %)
Power Requirement		5 V DC
Operating Environment	Temperature	5 °C to 45 °C
	Humidity	15 % to 85 %
Storage Environment	Temperature	-40 °C to 60 °C
	Humidity	5 % to 90 RH

- For the sake of periodic improvements, the drive's specifications and appearance are subject to change without prior notice.

- The maximum data transfer rate varies according to the performance capabilities of the PC.

- We have taken all possible measures to assure the quality of our products, but we cannot be responsible for the consequences if defect occurs.

Software

Install the appropriate CD Recording Authoring Software before using this unit.

* Please uninstall any previous CD burning software you may have loaded on your PC in order to prevent possible compatibility issues.

Once you have installed the application software, you may (if you wish) begin to reinstall previous software, taking note for errors. We recommend using the drive with the latest software as some problems encountered when using the drive can be solved by updating the software.

Safety Instructions

⚠ CAUTION : The laser used in the Writer can damage your eyes. Do not attempt to open the cover. To reduce the risk of electric shock, do not remove the cover (or back). There are no user-serviceable parts inside. Refer servicing to qualified service personnel. Use of controls or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ WARNING : To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

⚠ VORSICHT : Der in diesem Laufwerk benutzte Laser kann Ihre Augen schädigen.Versuchen Sie keinesfalls, die Abdeckung zu öffnen. Um die Gefahr eines elektrischen Schocks zu reduzieren, sollten Sie die Abdeckung (oder Rückseite) keinesfalls entfernen.Im Inneren des Geräts befinden sich keine Teile, die vom Benutzer selbst gewartet werden können. Überlassen Sie die Wartung qualifizierten Kundendiensttechnikern. Beachten Sie bei der Benutzung von Bedienelementen und der Durchführung von Prozeduren unbedingt die Anweisungen dieses Handbuchs, da andernfalls gefährliche Strahlung freigesetzt werden kann.

⚠ WARNUNG : Setzen Sie das Laufwerk keinesfalls Regen oder Feuchtigkeit aus, um die Gefahr eines Brandes oder elektrischen Schocks zu reduzieren.

⚠ ATTENTION : Le faisceau laser utilisé dans ce graveur est dangereux pour les yeux. Ne pas tenter d'ouvrir le couvercle. Ne déposer ni la façade, ni le panneau arrière (risque d'électrocution). Aucun élément interne n'est réparable par l'utilisateur. L'utilisation de commandes ainsi que l'exécution de procédures autres que celles spécifiées dans le présent guide risque de provoquer une dangereuse exposition aux radiations.

⚠ AVERTISSEMENT : Ne pas exposer ce matériel à la pluie ou à l'humidité (risques d'incendie et d'électrocution).

⚠ PERICOLO : Il dispositivo di lettura e scrittura utilizzato in questo masterizzatore utilizza un raggio laser che, se osservato da vicino, può danneggiare la vista. Evitare di smontare il coperchio dell'apparecchio. Al fine di prevenire eventuali folgorazioni, evitare di smontare l'apparecchio. All'interno dell'apparecchio non sono presenti parti che richiedono manutenzione da parte dell'utente. In caso di difetti o guasti, rivolgersi ad un Centro di Assistenza Tecnica. L'esecuzione di procedure diverse da quella espressamente indicate in questo manuale può provocare pericolose esposizioni alle radiazioni laser.

⚠ ATTENZIONE : Al fine di evitare cortocircuiti o principi di incendio, evitare di esporre questo apparecchio alla pioggia o ad una eccessiva umidità ambientale.

⚠ PRECAUCION : El láser utilizado en la unidad puede dañar sus ojos. No intente abrir la tapa. Para reducir el riesgo de descarga eléctrica, no quite la tapa (ni la parte posterior). No hay piezas internas que deba mantener el usuario. El servicio de mantenimiento debe efectuarlo personal técnico cualificado. El uso de controles o la ejecución de procedimientos distintos de los especificados en este manual pueden ser causa de exposición a radiación peligrosa.

⚠ ADVERTENCIA : Para reducir el riesgo de fuego o descarga eléctrica, no exponga este aparato a la lluvia ni a la humedad.

⚠ CUIDADO : O laser utilizado no Gravador pode provocar danos nos seus olhos.Não tente abrir a tampa. Para reduzir os riscos de choques eléctricos, não retire a tampa (nem o painel posterior). Não existem peças ajustáveis pelo utilizador no interior do aparelho. Solicite a assistência de pessoal qualificado para quaisquer trabalhos de reparação. A utilização dos comandos ou a execução de procedimentos para além dos especificados neste manual podem resultar numa exposição perigosa às radiações.

⚠ AVISO : Para reduzir o risco de incêndio ou choque elétrico não exponha este aparelho á chuva ou humidade.

CLASS 1	LASER PRODUCT
LASER KLASSE 1	PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT
CLASE 1	PRODUCTO LÁSER
CLASSE 1	PRODOTTO LASER

CAUTION : CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO THE BEAM.

ADVARSEL : KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING I ÅBEN TILSTAND OG VED AFBRUDTLÅSEFUNKTION. UND GÅ ATBLIVE RAMTAF LASERSTRÅLEN.

VARO! : LUOKKA 3B AVATTAESSAJAKUMOTTAESSALUKITUS NÄKYVÄÄ JANÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VÄLTÄ LASERSÄTEILLE ALTISTUMISTA.

ATTENTION : CLASSE 3B RAYONNEMENTLASER VISIBLE ETINVISIBLE EN CAS D'OUVERTURE ETENCLNCHEMENTS DEFECTUEUX, EVITER L'EXPOSITION AU FAISCEAU.

VORSICHT : SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG DER KLASSE 3B WENN ABDECKUNG GEÖFFNETUND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKTVERMEIDEN SIE ES, SICH DEM STRAHLAUSZUSETZEN.

ADVARSEL : KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING NÅR ÅPNES OG LÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.

VARNING : KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING FÖREKOMMER NÅR OCHMELLANLÅSETFÖRSTÖRS. UNNDVIK EXPONERING UNDER STRÅLEN.

- Microsoft® and Windows® are trademarks registered in the United States and other countries by the Microsoft Corporation.
- The company names and product names written in this manual are trademarks or registered trademarks of the respective companies.
- Please pay attention to handling Electrostatic Sensitive Devices, you may use anti-static products such as wrist straps, heel straps, mats to protect your body from electrostatic.

English	Please refer to the enclosed CD for the user manual.
Dutch	Wij verwijzen u naar de bijgevoegde CD voor de gebruikershandleiding.
French	Veuillez consulter le manuel d'utilisation présent sur le CD-ROM.
Turkish	Kullanıcı kılavuzunu ürün ile birlikte verilen CD'de bulabilirsiniz.
Finnish	Käyttööppaan löydät oheisesta CD:stä.
Danish	Brugsanvisningen findes på den vedføjede CD.
Swedish	Bruksanvisningenfinnpå den bifogadeCD-skivan.
Ukrainian	Будь ласка, зверніться до Керівництва користувача на компакт-диску, що додається.
Norwegian	Vennligst se bruksanvisningen på vedlagte CD.